

ANALYSIS OF THE CONTENT EFFECTIVENESS OF THE DEVELOPED MULTIMEDIA MODULE ON DOMESTIC WATER SANITATION

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ABSTRACT

A present study was conducted on content effectiveness of the developed multimedia module. For the study, based upon the nature of the research problem and objectives of the present study, experimental research design was selected. A total of thirty experts from the faculty of home science were selected for conducting beta test for quality assurance of the developed multimedia module. Score card was developed for data collection. The mean score was used for data analysis. The results of the study were revealed that for development of the multimedia module, content was collected and identified the issues and given to the selected experts along with a checklist for selecting key issues. Content for identified tribal domestic water sanitation management were translated into a vernacular language i.e. Telugu. Outlines, flow charts and story boards were prepared for the development of the multimedia module. Using a page based authoring tool, i.e., PowerPoint multimedia module was developed. Beta testing was done for quality assurance by the experts. The results of the study were revealed that the content analysis indicator "Practical utility"(22.0%) had a high percentage contribution towards content, effectiveness followed by informative (21.7%) and adequacy (21.0%). Module analysis revealed that the major indicator 'use of illustrations' contributes (22.6%) towards module effectiveness among the other indicators of the module followed by an animation (20.8%), audio and video (20.4%)

KEYWORDS: Research Problem, Multimedia, Content Effectiveness, Content Analysis & Beta Testing

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INTRODUCTION

To make the illiterate tribal communities water, sanitation literates, effective educational strategies with purposefully designed instructional materials are vital. Today electronic communication tools combined with massive coverage, even in remote areas allow a poor man get to be connected with knowledge sharing systems. Missing of tribal context and dialect is the limitation of the electronic media to reach the tribal community. If educational content is developed blending tribal dialect and "relevant" cultural context of the community the accelerated diffusion and adoption is possible.

Multimedia instruction using computer technology is one method that can be used to supplement or replace the traditional off-line and standardized education for educating illiterates. The Multimedia communications program blends creativity and technology in a dynamic and rewarding work. One can create and design educational material with moving and still images, text and sound in order to reach and engage varied audiences. The advent of multimedia and multimedia technologies has changed the way educators teach and

learners learn. With multimedia, the communication of the information can be done in a more effective manner and it can be an effective instructional medium for delivering information (Neo and Neo, 2000).

Vishnu (2011) studied effectiveness of animated modules of nutrition messages on high school children. Three modules were developed based on the selected nutrition messages in each category. Animated Module 1 (AM 1) is titled "Food groups and functions," Animated Module 2 (AM 2) titled "Be well red aware of anemia" and Animated Module 3 (AM 3) is titled "Bye bye to junk foods". In AM1 the indicator presentation contributed to the maximum, AM 2 indicator color had attained high percentage indicator score and in AM 3 the indicator's colour (18.7%), illustration (18.6%) and design (18.3%) ranged almost equally in contributing to the effectiveness of the module.

Girija and Vijayalakshmi (2010) developed a self learning material on the social sciences with the help of a computer multimedia package. The experimental group was treated with the self learning material and control group was treated with the traditional teaching. The findings indicated that self learning material with multimedia techniques brought improvement in Social sciences on the achievement of students from the experimental group and superior performance over traditional group.

Singaravelu (2010) conducted a study using the multimedia module on pedagogical technique for the scholars of Master of Philosophy. The research study findings showed that the experimental group Knowledge level was increased in post test after exposing multimedia module and it proved the effectiveness of multimedia assisted teaching in the pedagogical technique.

METHODOLOGY

For the study, based upon the nature of the research problem and objectives of the present study, experimental research design was selected.

The general profile included the variables like Content effectiveness of the developed module was studied in terms of content analysis and module analysis. A total of thirty experts from the faculty of home science were selected for conducting beta test for quality assurance of the developed multimedia module.

The variables selected for the study on the Content effectiveness of multimedia module: Content Analysis and Module analysis. The scorecard was developed for the study to gather the information from the respondents.

The mean scores were calculated to select the relevant tribal water sanitation issues for development of multimedia module and to assess the content effectiveness of the module.

RESULTS AND DISCUSSIONS

The results of the present study were presented below included the variables like content analysis and module effectiveness.

Content Analysis

Content analysis has been carried out in the areas like content, sequence, informative, adequacy, relevancy, practical utility, length of sentence, readability and language.

Table1: Content Analysis with Indicators Contribution Towards Content Effectiveness

N=30

S. No	Indicators	Mean Score	Percent Contribution of indicator
1.	Content sequence	2.12	17.6
2.	Informative	2.61	21.7
3.	Adequacy	2.52	21.0
4.	Relevancy	2.09	17.4
5.	Practical utility	2.64	22.0
Total		11.98	100

The table 1 showed that the content analysis indicator “Practical utility” (22.0%) had high percentage contribution towards content effectiveness followed by its informativeness (21.7%) and adequacy (21.0%).

The reason for attaining high contribution of practical utility might be due to the nature of the clientele who are not well educated with low socio- economic background. Imparting education to those clientele obviously need diverse communication strategies which provide more of practical utility, informativeness and adequacy. Keeping the nature of the clientele in mind the content was developed in the module.

The indicators content sequence (17.6%) and relevancy (17.4%) contribute to content effectiveness with almost equal percentile; however their contribution was little lower when compare to other indicators of the content analysis due to its generalized nature.

Module Analysis

Module analysis was measured using multimedia building blocks like module design, illustrations or images, animation and video as major indicators.

Table2: Module Analysis with Indicators Contribution Towards Module Effectiveness.

N=30

S.No	Major Indicators	Sub Indicators	Mean Score	Average Mean Score	Percent contribution of Indicator
1.	Module design	Attractiveness	2.12	2.13	17.8
		Relevancy	2.09		
		Logical sequence	2.19		
2.	Text	Length of sentence	2.51	2.18	18.2
		Readability	2.03		
		Local dialect	2.00		
3.	Illustration	Appropriate	2.70	2.71	22.6
		Relevancy	2.54		
		No. of illustrations	2.90		
4.	Animation	Speed	2.48	2.49	20.8
		Position	2.54		
		Liveliness	2.45		
5.	Audio & Video	Voice	2.35	2.45	20.4
		Clarity	2.52		

		Synchronization	2.48		
Total			35.9	11.96	100

It is evident from the 2 that, in module analysis the major indicator ‘use of illustrations’ contributed 22.6 percentage module effectiveness. The sub indicators like number of illustrations (2.90%), appropriateness (2.70%) and relevancy (2.54%) were highly contributed through its major indicator called illustrations to module effectiveness followed by animation (20.81%), and audio and video (20.48%). The main reason for their high contribution was intended clientele for whom the module was developed. Since the module is specifically designed and developed for the tribal women, out most care has been taken in using more of visual communication with the motion rather than textual and overall design. Use of illustrations and animations in multimedia module certainly enrich the teaching learning experience with sustained interest.

Similar results were observed in the study conducted by Emma *et al.* (2000) who developed a computer aided learning module for educating diabetic patients. They found that multimedia module with more of the visuals is very effective, colorful and useful in teaching practical skills and in promoting theoretical understanding.

Jyothi and Annamma (2004) studied the effectiveness of animated video film on anemia for adolescent girls. The results show that the video film is highly effective in imparting nutrition education since it involves hearing and seeing.

CONCLUSIONS

From the study, it was concluded that content analysis the indicator “Practical utility” (22.0%) had a high percent contribution towards content, effectiveness followed by informative (21.7%) and adequacy (21.0%).

The reason for attaining high contribution of practical utility might be due to the nature of the clientele who are not well educated with low socio- economic background. Imparting education to those clientele obviously need diverse communication strategies which provide more of practical utility, informative and adequacy. In this module keeping the nature of the clientele in mind the content was developed.

The indicators content sequence (17.6%) and relevancy (17.4%) contribute to content effectiveness with almost equal percentile; however, their contribution was little bit lower when compared to other indicators of the content analysis due to its generalized nature.

In module analysis the major indicator ‘use of illustrations’ contributed 22.6 percent towards module effectiveness. The sub indicators like Number of illustrations (2.90%), appropriateness (2.70%) and relevancy (2.54%) were highly contributed through its major indicator called illustrations to module effectiveness followed by animation (20.81%), audio and video (20.48%). Since the module is specifically designed and developed for the intended clientele i.e tribal women, utmost care had taken and used more of visual communication with the motion rather than textual. Use of illustrations and animations in multimedia module certainly enrich the teaching learning experiences with sustained interest.

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